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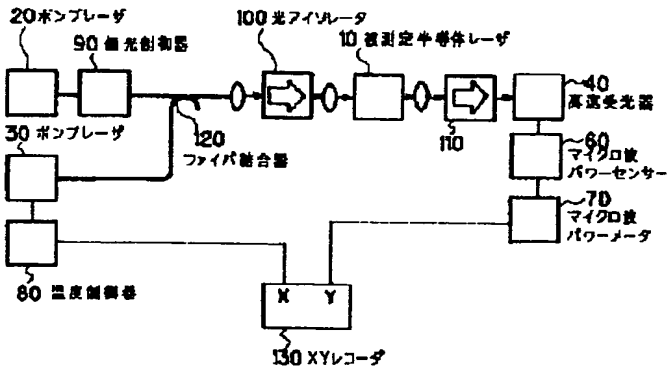
TITLE : DEVICE FOR MEASURING HIGH FREQUENCY RESPONSE CHARACTERISTICS OF SEMICONDUCTOR LUMINOUS ELEMENT



ABSTRACT : PURPOSE: To make it possible to measure high frequency response characteristics of a semiconductor luminous element over a wide range in a convenient way without being affected by stray capacitance by comprising a means for simultaneously injecting light from two pump lasers into a semiconductor luminous element to be measured and a microwave power sensor or the like.

CONSTITUTION: A device for measuring high frequency response characteristics of a semiconductor luminous element is provided with two pump lasers 20 and 30 that are slightly different from each other in oscillation frequency and a means for simultaneously injecting light of the two pump lasers 20 and 30 into a semiconductor luminous element 10 to be measured. This device further comprises a high speed light receiver 40 for receiving light to be measured that is emitted from the luminous element 10 and a microwave power sensor 60 that measures the power of a microwave signal which is emitted from the light receiver 40. An oscillation frequency of at least one of the pump lasers 20 and 30 is variable. This enables the measuring device to be improved, and makes it possible to measure high frequency response characteristics of a semiconductor luminous element in a convenient way without the use of an expensive wide-band spectrum analyzer.